

REMARKS

Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected claims 1-14 and 28-33 under 35 U.S.C. § 103(a) as being unpatentable over Farkas et al. (US Patent 6,001,730) in view of Kaufman et al. (US Patent 6,063,306).

It is Applicant's understanding that the cited references fail to teach or render obvious Applicant's invention as claimed in claims 1-14 and 28-33. In claims 1-14 and 28-33, Applicant claims a method of polishing copper which utilizes a slurry having a high pH (e.g., between 7.5-12) and having less than or equal to 10 weight percent of abrasives. It is the Examiner's position that Farkas teaches a copper slurry with a pH between 9.0-11 with between 1.0-12 weight percent silica as the abrasive. It is Applicant's understanding that Farkas fails to describe a copper slurry as suggested by the Examiner and as claimed by Applicant. It is Applicant's understanding that Farkas actually describes two separate and distinct slurries. A first slurry for polishing copper and a second slurry for polishing the tantalum barrier layer. The first slurry for polishing copper contains an oxidizing agent, carboxylate salt (e.g., citrate salt), an abrasive slurry/agent, a solvent and an optional triazole or triazole derivative (Col. 5, lines 61-64). The copper slurry has an abrasive in the amount of 1.0-12 weight percent (Col. 6, lines 17-19). After polishing the copper layer with the copper slurry, Farkas teaches to utilize a second slurry to polish the tantalum based barrier layer. The tantalum slurry has a pH between 9.0-11.0 (Col. 7, lines 31-39). As such, in Farkas, it is the tantalum slurry that has a pH between 9.0-11.0 and not the copper slurry. Accordingly, Farkas fails to teach polishing a copper

layer with a slurry having a high pH and an abrasive in the amount of 10 weight percent or less as claimed by Applicant.

As such, the combination of Farkas and Kaufman, fails to teach or render obvious Applicant's invention as claimed in claims 1-14 and 28-33. Applicant, therefore, respectfully requests the removal of the 35 U.S.C. § 103 rejections of claims 1-14 and 28-33 and seeks an early allowance of these claims.